

Title (en)  
DNA fragment encoding an AOX

Title (de)  
DNA Fragment kodierend für eine AOX

Title (fr)  
Fragment d'ADN codant pour une AOX

Publication  
**EP 0560401 B1 20001206 (EN)**

Application  
**EP 93105818 A 19861023**

Priority

- EP 86114700 A 19861023
- US 79101385 A 19851025

Abstract (en)  
[origin: EP0226752A1] Method for the site specific genomic modification of yeasts of the genus Pichia and novel DNA sequences useful therefor are provided. Pichia is transformed with a serially arranged linear DNA fragment comprising first and second insertable DNA fragments, which flank a marker gene. The insertable DNA sequences are homologous to defined portions of the Pichia genome and integrate by recombination at such defined sites. The resulting transformed organism contains the marker gene and any additional DNA sequences which are positioned between the insertable DNA fragments. In addition, the resulting transformed organism has either a disrupted or deleted sequence at the site of the genomic modification. Enhanced production of heterologous gene products is observed when using as the host for expression strains in which the alcohol oxidase gene has been disrupted. Upon disruption of the primary alcohol oxidase gene of Pichia, the existence of a second alcohol oxidase gene in Pichia was also discovered.

IPC 1-7  
**C12N 15/53**

IPC 8 full level  
**C12N 15/09** (2006.01); **C07K 14/02** (2006.01); **C12N 1/16** (2006.01); **C12N 1/19** (2006.01); **C12N 9/04** (2006.01); **C12N 15/00** (2006.01); **C12N 15/53** (2006.01); **C12N 15/63** (2006.01); **C12N 15/81** (2006.01); **C12N 15/90** (2006.01); **C12P 21/00** (2006.01); **C12P 21/02** (2006.01); **C12R 1/84** (2006.01)

CPC (source: EP KR US)  
**C07K 14/005** (2013.01 - EP US); **C12N 9/0006** (2013.01 - EP US); **C12N 15/00** (2013.01 - EP KR US); **C12N 15/63** (2013.01 - EP US); **C12N 15/815** (2013.01 - EP US); **C12N 15/90** (2013.01 - EP US); **C12N 2730/10122** (2013.01 - EP US)

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US6699691B2

Designated contracting state (EPC)  
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0226752 A1 19870701; EP 0226752 B1 19931215**; AT E197962 T1 20001215; AT E98695 T1 19940115; AU 1469988 A 19880721; AU 581107 B2 19890209; AU 593436 B2 19900208; AU 6388286 A 19870430; CA 1339209 C 19970805; CN 86107108 A 19870603; DD 255544 A5 19880406; DE 3650749 D1 20010111; DE 3650749 T2 20010405; DE 3689411 D1 19940127; DE 3689411 T2 19940721; DK 510786 A 19870426; DK 510786 D0 19861024; EG 17985 A 19911130; EP 0560401 A1 19930915; EP 0560401 B1 20001206; ES 2061433 T3 19941216; ES 2152233 T3 20010201; FI 864319 A0 19861024; FI 864319 A 19870426; FI 98931 B 19970530; FI 98931 C 19970910; HU 208552 B 19931129; HU T44612 A 19880328; IE 68454 B1 19960626; IE 862637 L 19870425; IE 940325 L 19870425; IL 80286 A0 19870130; IL 80286 A 19911212; IN 166443 B 19900512; JP 2614215 B2 19970528; JP S62104585 A 19870515; KR 870004141 A 19870507; KR 930002738 B1 19930409; MX 168390 B 19930521; NO 176923 B 19950313; NO 176923 C 19950621; NO 864275 D0 19861024; NO 864275 L 19870427; NZ 217809 A 19910726; PH 25990 A 19920113; PL 154843 B1 19910930; PL 262030 A1 19870907; PT 83618 A 19861101; PT 83618 B 19881014; US 4882279 A 19891121; YU 180386 A 19921221; YU 46758 B 19940510; ZA 867650 B 19870527

DOCDB simple family (application)  
**EP 86114700 A 19861023**; AT 86114700 T 19861023; AT 93105818 T 19861023; AU 1469988 A 19880415; AU 6388286 A 19861014; CA 514838 A 19860729; CN 86107108 A 19861024; DD 29558586 A 19861024; DE 3650749 T 19861023; DE 3689411 T 19861023; DK 510786 A 19861024; EG 65986 A 19861022; EP 93105818 A 19861023; ES 86114700 T 19861023; ES 93105818 T 19861023; FI 864319 A 19861024; HU 448086 A 19861024; IE 263786 A 19861006; IE 940325 A 19861006; IL 8028686 A 19861010; IN 731CA1986 A 19861008; JP 24940386 A 19861020; KR 860008825 A 19861020; MX 397186 A 19861008; NO 864275 A 19861024; NZ 21780986 A 19861006; PH 34343 A 19861009; PL 26203086 A 19861024; PT 8361886 A 19861024; US 79101385 A 19851025; YU 180386 A 19861023; ZA 867650 A 19861007